

BOOKE OF EXTRAORDINARIES + I. D. 1634



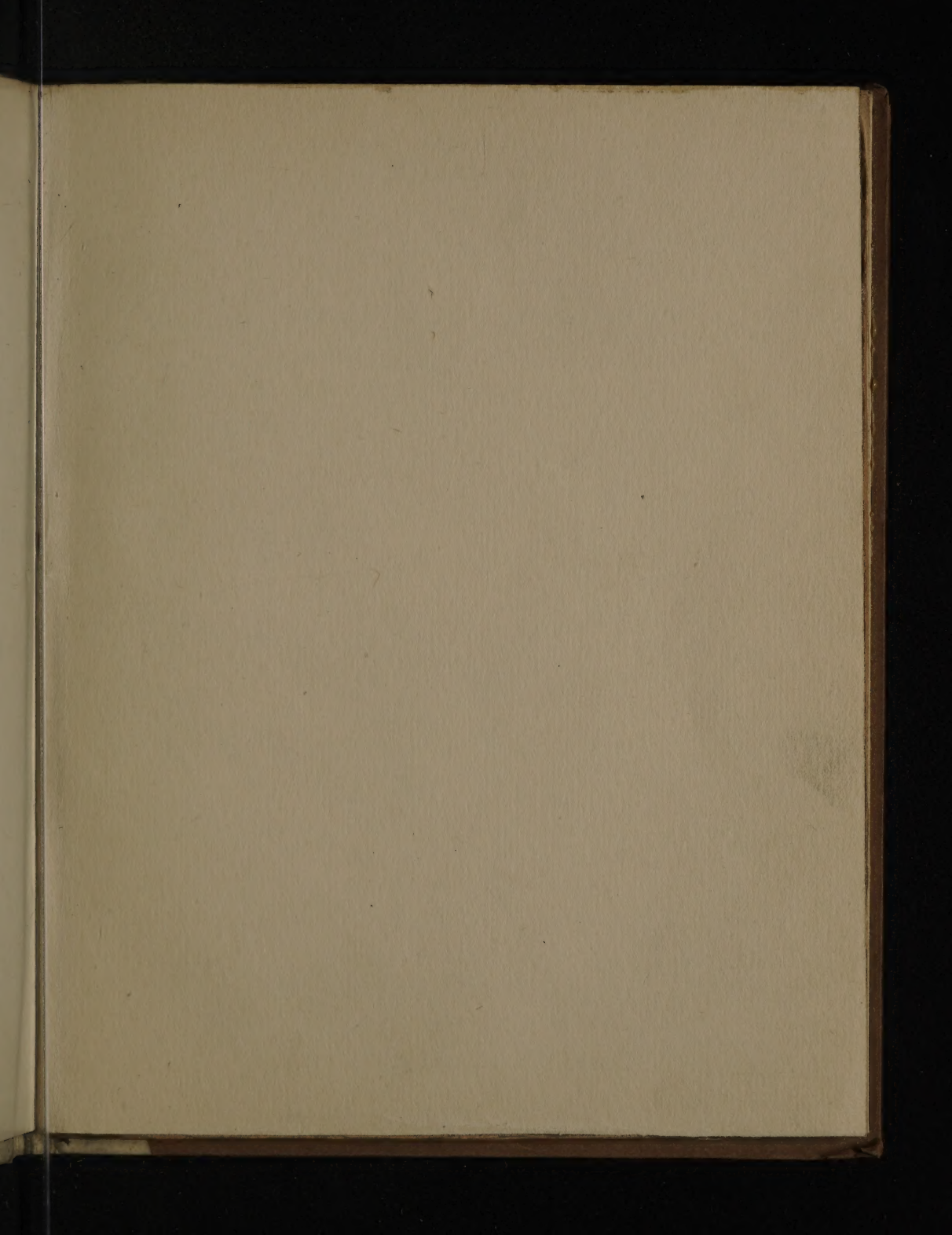




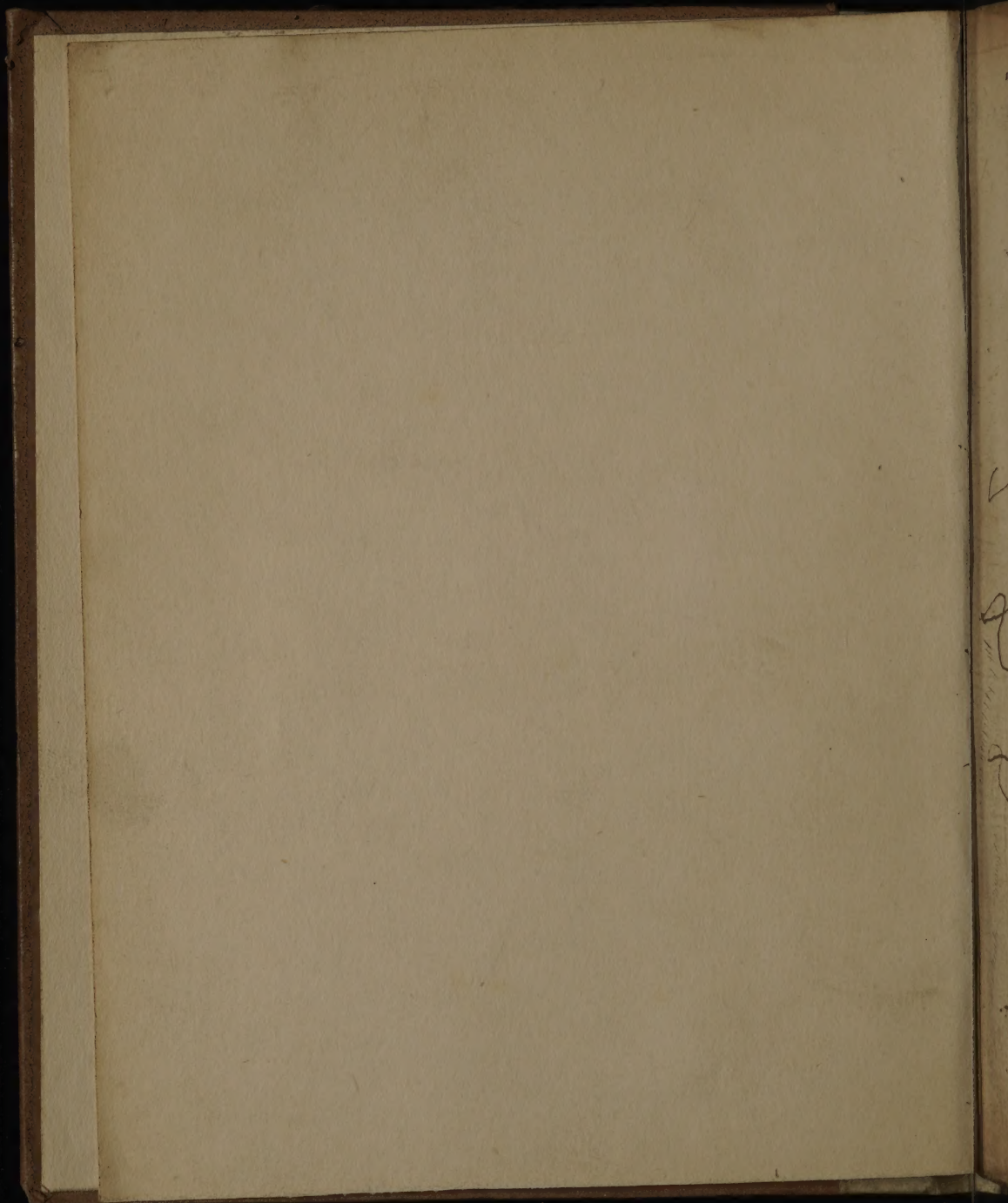


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Sigs O4, P1-4, q4, R1-S4, T1-3,  
Aa1-Ee4 only









# THE BOOKE OF EXTRAVAGANTS:

Wherein amongst others, is principal-  
ly contrived divers excellent and appro-  
ved Medicines for severall maladies.

*Thomson*

By I. B. By 1 B



1 2 3 4 5 6 7 8 9 10 11 12

L O N D O N.

Printed by Thomas Harper, for Ralph Mab: 1634.



THE BOOK OF  
EXTRA VAGANT:

Which among others is principal-  
ly conniv'd vice, carnal and up-  
-and-down for several hundred.



LONDON:  
Printed by J. Smith, in the Strand, 1734.



## To the Reader.

**C**ourteous Reader, forasmuch as there were divers experiments that I could not conveniently, or rather my occasions would not permit me to dispose in such order as I would have done; I thought it would not bee amisse to call them by the names of Extravagants, and so to set them downe as I found them, eyther inserted amongst other my notes, as I put them in practise, or as they came into remembrance.



*How to make a light burne under the water, being  
a very pretty conceipt to take fish.*

**L**et there be a glasse, as A, having a hole at the bottome, to put a candle in with a screwed socket. The socket must have a loope at the bottome, whereunto you must hang a weight of such heavinesse, that it may draw the body of the glasse under water. The necke of this glasse must bee open, and stand above the water; also a-



bout the necke must bee fastened a good broad peece of wood; round about which (but on that side of it that is next unto the water) must be placed divers peeces of looking glasses; so the light of the candle in the glasse body will



will bee multiplied according unto the number of them. All the fishes neere unto it will resort about it, as amazed at so glorious a sight, and so you may take them with a cast net or other.

*How to make an image hang in the middle of a glasse.*

**M**ake the lower part of the image of hard wax, and the upper part of wood, and overlay it with oyle colours; then put it into a globe glasse filled with fayre water, and which way soever you turne the glasse, the image will still hang in the middle, and stand as it were upright; which, to my knowledge, hath been a thing causing no small admiration among divers that have not understood the cause of it.

*How to make five or six dice of the ordinary bignesse of dice, such as you may game withall, and such as would be taken by their lookes to be ordinary dice, and yet all of them to weigh not above one grain.*

**T**ake a peece of Elder, and pith it, lay the pith to dry, and then make thereof with a sharp knife five or six dice, and you shall finde it true that I haue sayd.

*To lay gold on any thing.*

**T**ake red Lead ground first very fine, temper it with linseed oyle: write with it, and lay leafe gold on it, let it dry, and pollish it.

*To lay gold on glasse.*

**G**Rinde Chalk, and red Lead, of each a like quantity, together, temper them with linseed oyle, lay it on; when it is almost dry, lay your leaf gold on it, when it is quite dry polish it.

*To make yron as soft as lead.*

**T**Ake black flints, powder them very finely; then put the powder in an iron pan, and make it red-hot, then cast it on a marble stone, till it be almost cold, then make it red-hot againe, and let it coole, and grinde it so long till it cleave to the stone, and grinde as it were clay; then put that in a glasse, and set it under the eaves of a house, where the Sunne commeth not nigh in the day, then the night after take out the water that you shall finde in the glasse above the powder, then take that powder and grinde it with the water, and put it in a stillatory, and let it still out the halfe; after ward poure the water againe on the sayd powder, and still it againe with a soft fire; then take and see the that water till the halfe bee wasted, then take some iron blade that is new broke, and put it together, and hold it so a little while; then take of the water which was sod to the half, and with a feather lay it first to the one side of the blade, and when the water is cold, lay it on the other side, and it will soder fast with this water; and with this water you may make Steele as soft as lead. It is likewise a soveraigne water to help the gout, being anoynted where the grieft is, for it giveth ease very speedily.

*To colour tin, or copper, &c. of a  
golden colour.*

**T**AKE linseed oyle, set it on the fire, scum it cleane, then put therein of amber, and aloe hepaticum, a like quantity, then beat and stir all well together with the oyle till it wax thick; then take it off, and cover it close, and set it in the earth three dayes: when you would use it, strike your metall all over therewith, and so let it dry, and it will be of a golden colour.

*To gild iron with a water.*

**T**AKE running water 3 pound, rochallum 3 pound, and Roman vitreoll one ounce, of vardigrease one penny waight, saltgem three ounces, orpment one ounce, boyle all these together, and when it begins to boyle, put in lees of tartar and bay salt, of each halfe an ounce; make it seethe, and being sod a pretty while, take it from the fire, and strike the iron over therewith, then let it dry against the fire, and then burnish it.

*To solder on iron.*

**S**ET your joynt of iron as close as you can, then lay them so in a glowing fire; then take of Venice glasse in fine powder, and the iron being red-hot, cast the powder thereon, and it shall solder of it selfe. If you clap it in clay, it will be the surer way.

*To*



*To gild on iron or Steele.*

**T**AKE one ounce of argall, three drammes of vermilion, and two drams of botarmeniack, with as much aqua vitæ, then work and grinde them all together on a stone; with linseed oyle; having so done, put thereto lapis calaminaris as big as a hazell nut, and grinde therewith in the end three or foure drops of varnish; take it off the stone, and strain it through a linnen cloth into a stone pot, (for it must bee as thick as hony) then strike over your iron therewith, and let it dry, and then lay your gold or silver on, as you would do upon the varnish.

*A varnish like gold, for tin, silver,  
or copper.*

**T**AKE small pots well leaded, then put therein six ounces of linseed oyle, one ounce of mastick, one ounce of aloes epaticum; make them altogether in fine powder, and then put it into your sayd pot, and cover it with such another; yet in the bottom of the uppermost pot make a small hole, wherein put a small stick with a broad end beneath to stir the other pot withall, and when the pots are set just together, close them all about with good clay, and couer them all over also, leaving the hole open above to stir the other pot with the stick: set it over the fire, and stir it as often as it seetheth, and when you will gild, pollish your metall over first, and then strike this over the metall, and let it dry in the Sunne.



*To lay Gold on Iron, or other mettall.*

**T**Ake liquid Varnish. i. Turpentine, & oyle of Lynseed, of each an ounce: mixe them all together: with this ground you may gild on any mettall, first striking it upon the mettall, and afterward lay on the gold or silver, When it is dry, polish it.

*To make Ice that will melt in fire, but not dissolve in Water.*

**T**Ake strong water made with saltpeter, allum, and oyle of tartar, of each, one pound. Infuse them together, then put into them a little *aqua ardens*, and it will presently coagulate them, and turne them into ice.

*A cement as hard as stone.*

**T**Ake powder of Loadstone, and of flints, a like quantity of either, and with whites of egges, and gumme dragant, make paste, and in a few dayes it will grow as hard as a stone.

*To make Paper waved like unto marble.*

**T**Ake divers oyled colours, put them severally in drops upon water, and stirre the water lightly, and then wet the paper (being of some thicknesse) with it, and it will be waved like a marble: dry them in the Sun.

To make Copper or Brasse have the colour of silver.

**T**ake *Sal Armoniacke*, allum, and salt, of each a like quantity, and with a little filings of silver, let all be mixt together, then put them into the fire, that they may be hot, and when they shall cease to smoke, then with the same powder moystned with spittle, rub your Copper or Brasse.

How to make glew to hold things together as fast  
as stone.

**T**ake of the powder of tile sheard, two pound, unflake lyme, foure pound, oyle of Lynseed, a sufficient quantity to temper the whole mixture; this is marvellous strong.

To make a thinne glew.

**T**ake *gluten piscis*, beate the same strongly on an Anvill, till it be thin; after lay it to soke in water, untill it be come very soft and tender: then worke it like paste, to make small rowles thereof, which draw out very thinne, and when you will worke with it, put some of it into an earthen pot, with a little water, over the embers, and skim the same very cleane, and let it seeth a little while, then worke with the same: keeping it still over the fire. With this glew you may fasten peeces of glasse together.

*To make Iron have the colour of Brasse.*

**F**irst, polish it well, rub it after with *aqua fortis*, wherein the filings of brasse are dissolved: the like may be done with Roman vitrioll dissolved in vinegar and faire water, of each a like quantity.

*To make wood or bone red for ever.*

**T**Ake the powder of Brazill, mingle it well with milke, but so, that it be very red, and put therein, either wood or bone, letting it lye in eight dayes, and it will looke red for ever:

*How with one Candle to make as great a light, as otherwise of two or three of the same bignesse.*

**C**Ause a round and double glasse to be made, of a large size, and in fashion like a globe, but with a great round hole in the top, and in the concave part of the uppermost glasse, place a candle in a loose socket, and at the same hole or pipe which must be made at the side thereof, fill the same with spirit of wine, or some other cleere distilled water that will not putrifie, and this one candle will give a great and wonderfull light, somewhat resembling the sunne beames.

*A Cement for broken Glasses.*

**B**Eate the whitest Fish glew with a hammer, till it begin to waxe cleere, then cut the same into very small pieces, suffering the same to dissolve on a gentle fire, in a lea-



ded pan, with a few drops of *aqua vite*, then let some other that standeth by, hold both the pieces that are to be cemented, over a chafingdish of coles, till they be warme: and during their heat, lay on the dissolved giew with a fine penfill: then binde the glasse with wyre or threed, and let it rest till it be cold.

*An admirable secret of representing the very forme of Plants, by their ashes, philosophicall prepared, spoken of by Quertitanus and Angelus salæ.*

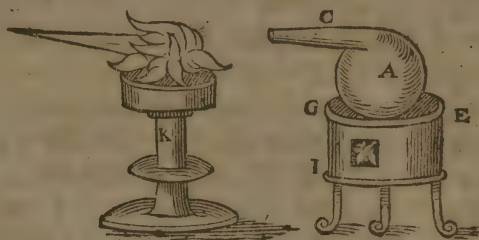
**T**AKE saith hee, the salt both the fixed and the volatil also. Take the very spirit, and the phlegme of any herbe, but let them all be rightly prepared; dissolve them, and coagulate them, upon which if you put the water stilled from May dew, or else the proper water of the herbe you would have appear, close them all very well in a glasse for the purpose, and by the heat of embers, or the naturall heat of ones body, at the bottome of the glasse, the very forme and *Idæa* thereof will be represented: which will suddenly vanish away, the heat being withdrawne from the bottome of the glasse. As I will not argue the impossibility of this experiment, so I would be loth to employ mine endeavours, untill I were expert therein.

*A device to bend glasse Canes, or make any small worke in Glasse.*

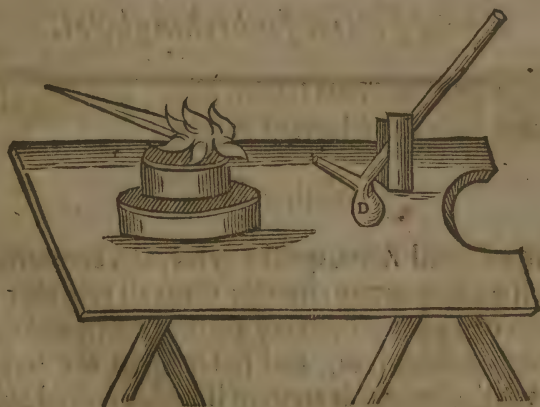
**L**ET there be a vessell of Copper about the bignesse of a common Foot-ball, as, A, let it have a long Pipe at the top as G. which must be made so that you may upon occasion screw on lesser, or bigger vents made for the



the purpose. Fill this one third part with water, and set it over a fornace of coals, as F, G, H, I, and when the water beginneth to heat, there will come a strong breath out of



the nose of the vessell, that will force the flame of a lampe placed at a convenient distance as K: if you hold your glasse in the extention of the flame it will melt suddenly; so you may worke what you will thereof. There are that instead of this globe make use of a Pipe, as A, fastned in a



sticke as, F, of which I have made use, but hold it not so convenient for those that are not accustomed thereunto.

*An excellent Water for any Morphue, or scur-  
viness in the Face.*

**T**Ake of quicke Sulphur 2. ounces, blacke Sope, the rankest and illest favoured that can bee got: binde them up in a cloth, and hang them in a pint of the strongest wine-vineger for the space of nine dayes; herewith wash the Morphue in the Face or elsewhere, and let it dry in of it selfe: This Water will for the present staine the face with a yelow collour, which will weare away in time.

*How to soften Iron.*

**T**Ake of Allum, sal Armoniacke, Tartar, a like quantity of either, put them into good vineger, and set them on the fire: heat your Iron, and quench it therein.

*A good Cement for broken glasses.*

**T**Ake raw silke, and beat it with glasse, and mixe them together with the whites of Egges.

*Another.*

**T**Ake of calcined flints, quicke lyme, and common salt, of each a like quantity: mingle them all together with the whites of Egges; then take a linnen cloth and spread it over with this mixture, and put it upon the fracture, and let it dry; afterwards annoint it with Linseed oyle.

*How to cause that the same quantitie both of powder and shot discharged out of the same peece shall carry closer, or more scattering.*

**T**AKE the quantitie of a pease of Opium, and charge it amongst the shot, and this will make the shot to flie closer together then otherwise it would. This I had of a Sea-man, who had made triall hereof, as he said, and unto whom I sold some for the same purpose.

*A Baite to catch Fish with:*

**T**AKE *Cocculus India* ʒ ss, Henbane-seeds, and wheaten flower, of each a quarter of an ounce, hive honey as much as will make them into paste. Where you see most store of Fish in the River, cast of this paste into it in divers little bits about the bignesse of barley cornes, and anon you shall see the fish swimme on the top of the water, some reeling to and fro as drunken, others with their bellies upwards as if they were nigh dead; so that you may take them either with your hands, or a small net at the end of a sticke made for the same use. Note here, that if you put the Fish that you thus take, into a bucket of faire and fresh water, or if it raine after that you have cast this your bait into the water, they will revive and come to themselves to your admiration; and this was told me by a Gentleman of good credit, that hath often made use thereof.

I have heard that the stinking oyle drawne out of the roots of Polipody of the oake by a retort, mixed with Turpentine, and hive-honey, and being anointed upon  
the



the bait will draw the fish mightily thereto, and make them bite the faster : and I my selfe have seene fishes, as Roches, and taken in the dead time of Winter with an angle, bayted onely with paste made of Wheaten flowre, but it hath beene in the morning, and when the Sunne hath shined.

*How to write without inke that it may not be seene,  
unlesse the paper be wet with water.*

**T**AKE some Vitriol, and powder it finely, and temper it with faire water in any thing that is cleane, when it is dissolved, you may write whatsoever you will with it, and it cannot be read, except you draw it through water wherein some powder of galls hath beene infused, and so it will shew as blacke as if it had beene written with inke.

*How to make white letters in a blacke Feild.*

**T**AKE the yelke of a new layd egge, and grinde it upon a marble with faire water, so as you may write with it : having ground it on this wise, then with a penne dipr into it, draw what letters you will upon paper, or parchment, and when they are through drie, blacke all the paper over with inke ; and when it is drie, you may with a knife scrape all the letters of that you wrote with the yelke of the egge, and they will shew faire and white.

*How to sodder upon Silver, Brasse, or Iron.*

**T**HERE are two kindes of Sodder, to wit, hard Sodder, and soft Sodder. The soft Sodder runneth sooner then the

the hard : wherefore if a thing be to be sodered in two places, which cannot at one time well be performed, then the first must be sodered with hard soder, and the second with soft: for if the first be done with soft, it will unsoder againe before the other be sodered. Note, that if you would not have your soder to runne over any one part of the peece to be sodered, you must rub over that part with chalke that you would not have it runne upon.

Note likewise that your soder must be beaten thinne, and then laid over the place to be sodered, which must be first fitted together, and bound with wyer as occasion shall require. Then take Burras, powder it, and temper it with water like pap, and lay it upon the soder, and let it drie upon it by the fire : Afterwards cover it with quicke coals, and blow them up, and you shall see your soder run immediately : then presently take it out of the fire, and it is done.

*Hard Soder is thus made.*

**T**Ake a quarter of an ounce of silver, and a three penie weight of copper, melt them together, and it is done.

*Soft Soder is thus made.*

**T**Ake a quarter of an ounce of silver, and a three penie weight of brasse, melt them together, and it is done.

*How to gild Silver, or Brasse, with water-gold.*

**F**irst take about 3. ii. of quicke silver, put it into a little melting pot, and set it over the fire, and when it beginneth



neth to smoke, put into it an angel of fine gold: then take it off presently, for the gold will presently be dissolved in the quicke silver, which if it be too thinne, you may through a peece of fustian straine a part of the quicke-silver from it. Note likewise that your silver, or brasce, before you go about to gild it, must be boyled in argol, and beare, or water, and afterwards scratcht with a wyer brush: then rub the gold, and quicke-silver upon it, and it will cleave unto it, then put your silver or brasce upon quicke coales untill it begin to smoke: then take it from the fire, and scratch it with your wyer-brush: Do this so often till you have rubd the quicke-silver as cleane off as you can, then shall you perceive the gold to appeare of a faint yellow colour, which you may make to shew faire with sal armoniacke, bole armoniacke, and vardigrece ground together, and tempered with water.

*How to take the smoake of Tobacco through a glasse of water.*

**F**irst fill a pinte glasse with a wide mouth, almost full of faire water: fill also a pipe of Tobacco, and put the pipe upright into the glasse of water, so that the end of the pipe may almost touch the bottome of the glasse: then take another crooked pipe, and put it into the glasse, but let the end thereof not touch the water: waxe then the mouth of the glasse, that no ayre may come in nor out, but at the pipes: then put fire unto the Tobacco, and sucke with your mouth, at the end of the crooked pipe, and you shall see the smoake of the Tobacco penetrate the water, and breake out of a bubble, and so come into your mouth.



To colour Ivory or any other bones, of an excellent  
greene colour.

**T**Ake *aqua fortis*, wherein dissolue as much Copper, as  
the said water is able, then let the bones that you  
would have coloured, lye in the same all night, and they  
will be like a Smaragdin colour: *Mizaldus*.

*How to make birds drunke, so that you may take them with  
your hands.*

**T**Ake such meate as they loue, as Wheate, Barley, and  
lay the same to steepe in the lees of Wine, or else in  
the iuyce of Hemlockes, and sprinkle the same in places  
where Birds use to haunt.

*A way to catch Crowes.*

**T**Ake the Liuer of a Beast, and cut it in diuers pieces,  
put then into each piece, some of the powder of *nux  
vomica*, and lay these pieces of Liuer in places where  
Crowes and Rauens haunt. Anon after they haue eaten  
them, you may take them with your hands, for they can-  
not flye away.

*How to take Crowes or Pigeons.*

**T**Ake white Pease, and steepe them eight or nine daies  
in the Gall of an Oxe: then cast the same where they  
use to haunt.

You may make Partridges, Duckes, and other birds  
drunke, so that you may take them with your hand: if

you set blacke wine for them to drinke in those places whereunto they resort.

*Another.*

**T**AKE Tormentill, and boile it in good wine: put into it Barley or other graine: Sprinkle this in those places you haue appointed to take Birds in, and the Birds will eate the pieces amongst the graine, which will make them so drunke, that they cannot flye away. This should be done in the winter, and when it is a deepe snow.

*Another way to take Birds.*

**M**AKE a paste of barley meale, onion blades, and Hembane seeds: set the same upon seuerall little boards, or pieces of tiles, or such like, for the birds to eate of it.

*How to make Brasse white for ever.*

**T**AKE Egge shels, and burne them in a melting pot: then powder them, and temper them with the whites of Egges; let it stand so three weekes: heate your brasse red hot, and put this upon it.

*How to make Marble.*

**T**AKE 3 vj. of quicke Lime, put it into a pot, and poure upon it, one pinte of good wine: let it stand five or sixe dayes, stirring it once or twice a day: then poure off the cleare, and therewith temper flint stones calcined, and made into fine powder, then colour it, and make of it what you please, and let them dry.

*How*

*How to whiten copper.*

**T**AKE a thin plate of copper, heat it red-hot divers times, and extinguish it in common oyl of tartar, and it will be white.

*To make Saltpeter.*

**T**AKE quick lyme, and poure warm water upon it, and let it stand six dayes, stirring it once or twice a day: take the cleare of this, and set it in the Sunne untill it bee wasted, and the Saltpeter will remaine in the bottom.

*How to make Corall.*

**T**AKE of red Lead ground,  $\frac{3}{4}$  i. vermilion finely ground,  $\frac{3}{4}$  ss. unquenched lyme, and powder of calcined flints, of each  $\frac{3}{4}$  vj. these powders must bee tempered with a *Lixivium* that is made with quick lyme and wine: adde unto the whole a little salt; then make thereof what you list; then boyle them in linseed oyle.

*How to make Pearles of Chalk.*

**T**AKE some Chalk, and put it into the fire; there let it lie untill it break: temper it then with the whites of eggs. Then make of it divers fashions of Pearles, both

Cc 3

great



great and small : wet them being dried, and cover them with leafe gold, and they are done.

*An approved and excellent plaster for ach in the  
raines of the back, or in any other part  
whatsoever.*

**T**Ake one pound of black Sope, and foure ounces of frankincense, and a pinte of white wine vinegar : boyle all together upon a gentle fire, untill it be thick ; spread it then upon a lether, and apply it unto the grieved place. If the ach bee very great and fervent, then adde unto it a little *aqua vita*, and it will be much better.

*An excellent oyntment for the Shingles, Morpew,  
Tetters, and Ringwormes.*

**T**Ake a quarter of a pound of sope, and mingle with it two drams of the powder of black Ellebor, litharge of silver in fine powder, two ounces, vardigrease halfe an ounce, and a quarter of an ounce of glasse in powder, and as much quicksilver, make them all into an oyntment by stirring them well together ; wherewith anyont the grieved parts: This is approved and true.

*An excellent Balme, or water for grievous sore eyes,  
which commeth either of outward accident, or  
of any inward cause.*

**T**Ake two spoonfulls of the juyce of Fennell, and one  
spoonfull and a halfe of the juyce of Celandine, and  
twice as much hony as them both; then boyle them a  
little upon a chafingdish of coales, and scum away the  
dregs which will ascend, but first let it coole somewhat, and  
then let it run through a fayre cleane cloth: then put it  
into a violl of glasse, and stop it close. Put a little quanti-  
ty of this into the eye. This medicine is approved, and  
more precious than gold.

*Take*

*A speedy way to assuage the paine of any scald, or  
burne, though never so great, and to take  
the fire out of it.*

**T**Ake old lawn rags, dip them into Runnet, for want  
of it dip them into verges, and apply them cold up-  
on the grieved place, shifting them for halfe an houre to-  
gether, as oft as they dry: this I have known to give ease  
in an instant, and quickly to take out the fire.

*An approved oyle for to beale any burne  
or scald.*

**T**Ake of housleek one handfull, and of brooklime as  
much, boyle them in a quart of creame untill it turne  
unto

unto an oyle ; boyle it very gently : with this oyle a little warmed, anoint the grieved place twice a day, and it will soone make it well.

*An oyntment, very excellent and often proued,  
for the same.*

**T**AKE a good quantity of mosse scraped from off a stone wall, fry it in a fryingpan with a call of mutton suet a good while, then straine it, and it is done. Dresse the grieved part therewith once or twice a day, as you shall see fitting.

*Another oyntment for a burne.*

**T**AKE one part of sallet-oyle, and two parts of the whites of eggs, beat them together exceeding well, untill they come to be a white oyntment, wherein dip the feather of a black hen, and anoynt the grieved place diuers times every day, untill such time as the scales fall off, using in the meane while neither clothes nor any outward binding. This, sayth *Minsbet* the authour, though it seeme to be a thing of no estimation, yet was there never found any more effectuell for a burn than it is.

*An excellent oyntment for a green wound.*

**T**AKE foure handfuls of Clownes, Allheale, bruse it, and put it into a pan, and put to it foure ounces of barrowes greafe, sallet-oyle halfe a pound, Bees wax a quarter of a pound,



pound; boyle them all untill the iuyce be wasted; then straine it, and set it over the fire againe, and put unto it two ounces of Turpentine, then boyle it a little while more, and it is done. Put hereof a little in a saucer, and set it on the fire, dip a tent in it, and lay it on the wound, but first lay another plaister round about the wound, made of diapalma mollified a little with oyle of Roses: This cureth very speedily all greene wounds, as saith M. Gerard.

*A Balsam of wonderfull efficacy.*

**T**Ake Burgundie pitch, brimstone, and white frankincense, of each one ounce: make them into an oyntment with the whites of egges: first draw the lips of the wound, or cut, as close as you can, then lay on some of this spread upon a cloth, and swathe it ouer afterwards.

*An excellent healing Water, which will drie up any old sore, or heale any greene wound.*

**T**Ake a quarter of a pound of Bolearmoniacke, powder it by it selfe, then take an ounce of Camphire, powder it also by it selfe: also take foure ounces of white Coppras in powder: mixe the Coppras and Camphire together, and put them into a melting pot, and set them on the fire, untill they turne unto water: afterwards stirre it untill it come to be as hard as a stone: then powder it againe, and mixe it with the Bolearmoniacke: keepe this powder close in a bladder, when you would use it, take one pinte and a halfe of faire water, set it on the fire, and when it is even ready to boyle,

Dd put

put into it three spoonfulls of the powder; then take it off from the fire, and put it into a glasse, and let it stand untill it be cleare at the top, then take of the clearest, and wash the sore very warme therewith, and dip a cloth foure double in the same water, and binde it fast about the sore with a rowler, and keepe it warme: dresse it thus twice a day.

*A Water for a Fistula.*

**T**Ake one pint of white wine, 1 ounce of juyce of Sage, three penie weight of Borace in powder, Camphire in powder the weight of foure pence: boyle them all a prettie while on a gentle fire, and it is done: Wash the Fistula with this water, for it is certainly good, and approved to be true.

*A Water for the Toorbache.*

**T**Ake ground ivie, salt, and spearemint, of each an handfull: beat them very well together, then boile them in a pint of vineger; straine it, and put a spoonfull of it into that side that aketh, and hold downe your cheeke.

*Another Water approved for the same.*

**T**Ake red rose leaves halfe a handfull, Pomegranate-flowers as many, two gaules sliced thinne: boyle them all in three quarters of a pint of red wine, and halfe a pint of faire water untill the third part be wasted: then straine it, and hold a litle of it in your mouth a good while;

while: then spit it out, and take more. Also if there be any swelling on your cheek, apply the strainings betwene two clothes as hot as may be suffered. This I have knowne to do good unto divers in this Citie, when as they have beene extreamely pained.

*To make a Water for the eyes.*

**T**AKE *Lapis Calaminaris*, and burne it in the fire nine times, and quench it in white wine, and beat it into powder, and when you use it, put it into rose-water, and drop the water into the eye.

*For Deafenesse.*

**T**AKE a good quantitie of Camomill, and two handfulls of greene Wormewood, and see the them in a pot of running water till they be very well sodden, and put a funnell over it, and let the steame go up into the eare, and then go to bed warme, and stop your eare with a little blacke wooll, and a grain of Civet: do this morning and evening, and with Gods assistance you shall finde ease.

*An excellent Electuary for the Cough, Cold,  
or against Flegme.*

**T**AKE of Germander, Hissope, Horehound, white Maidenhaire, Agrimony, Bettony, Liverwort, Lungwort, and Harts-tongue, of each one handfull: put these to nine pints of water, and let them boyle to three pints; then let it coole and straine it. To this

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juyce put of clarified honey halfe a pound, fine powder of Liquorice five ounces, fine powder of Enulacampana root three ounces, boyle them to the thicknesse of an Electuary. Take of this at any time, but specially in the morning fasting, as also at night when you go to bed, or two houres after supper, the quantitie of a Walnut or Nutmeg.

*A very excellent salve to heale, well proved, for any old sore, or new wound.*

**T**Ake of Waxe, Rosin, Sheeps tuet, Turpentine, of each a like quantitie, Sallet oyle also as much: mixe them all together, and take the juyce of Smallach, of Planten, of Orpin, of Buglosse, of Comfery, of each a like quantitie: set them boyle untill the iuyce of the hearbes be consumed; and in the seething put a quantitie of Rose-water, and it will be a very good Salue.

*A soveraigne Water to heale a greene wound:  
and to stanch bloud.*

**T**Ake a pottle of running water, and put thereto foure ounces of Allum, and one ounce of Copras, and let them seeche to a quart, and then straine it, and keepe it in a glasse, and wash the wound, and wet a cloth, and lay to the sore, and with Gods helpe it will soone be healed.

*For the Byting of a mad Dogge.*

**T**Ake brine, and bathe the wound : then burne Claret wine, and put in a little Mithridate, and so let the patient drinke it ; Then take two live pigeons, cut them through the middle, and lay them hot to his hand if he be bitten in the armes. If in his legges, to the sole of his feet.

*An Oyle for any Ach.*

**T**Ake a pound of unwashed butter, and a handfull of red mints, and a handfull of camomill, a handfull of rew, two ounces of oyle of Exeter : stamp the herbs to a juyce, and boyle them with the butter ; straine them in a cloth, and rub them out very well : this so done, take the oyle of Exeter, and put to them, and stir them well together, and put them into a gally pot, and where the ach is anoint the place against the fire, and lay a browne paper on it, and wrap a cloth about the place, and keepe it warme : proved to be excellent.

*To stanch the bleeding of a cut.*

**T**Ake a peece of a felt hat, and burne it to a coale ; beat it to powder, and put it in the cut, and it will stanch the bleeding presently. Or else apply linnen rags that in the spring of the yeere have beene often washed in the sperm of frogs, and after ward dried in the Sunne.

*Shifon**For an ague, to bee layd to the wrists.*

**T**ake a handfull of foot, a spoonfull of bay salt, halfe a spoonfull of pepper ; bruse them together, and temper them with two yelks of eggs ; spread it on a cloth, and lay it to the wrists.

*Uls**Uento llerio**Almond milke for the cough of the lungs.**Uen*

**T**ake foure spoonfulls of French barley well washed, and boyle it in three wine pints of faire water, unto a pint and a halfe ; then take it from the fire, and let it coole, and settle ; then take the cleere liquor, and straine therewith a quarter of a pound of sweet almonds blanch'd, and beaten ; then set it on the fire, and let it boyle a while till it begin to grow thick ; then beat two yelks of eggs, and put them to it ; stirre them well together, and put to it as much fine suger as will sweeten it, and a spoonfull of damask rose water, and so let it boyle a while longer, till it be as thick as good creame ; eat of it warm twice or thrice a day, but at break fast especially.

*For a scald head.*

**T**ake a pint of running water, and as much Mercury as a good walnut, three or foure branches of Rosemary ; boyle these all together till a third part be boyled away.



way, or thereabout, and every morning and evening wash the infected place with some of this water cold, and a quarter of an houre after or lesse anoint the place with lamp oyle, and every morning after the first dressing try to pull up some of the hayre as easily as you can : have care where you set this water, for it is poyson: If you shave the head, and apply a plaster called *Emplastrum Cephalicum cum Euphorbio*, it is also excellent.

*For to beale a red face that hath many  
pimples. Proved.*

**T**Ake foure ounces of barrowes grease, and as much oyle of bayes, halfe an ounce of quicksilver killed with fasting spettle, then take two spoonfulls of wilde tanfic water, or honisuckle water, and let all be ground in a mortar three houres at the least, untill you see nothing of the quicksilver, and so keep it close in a glasse; the older, the better; and when you go to bed anoint the face, and look that you keep it from your eyes.

*To wash the Face, if it be given to beat.*

**T**Ake Snailles, beat them shels and bodies together: steep them a night in new milke: then still them with the flowers of white Lillies:

*To*

*To make Vsquebach.*

**T**Ake a gallon of the smallest *Aqua vite* you can make, put it into a close vessell of stone; put there-to a quart of Canary Sacke, two pounds of Raisons of the Sunne stoned, but not washed, two ounces of Dates stoned, and the white skinnes of them pulled out, two ounces of Cinamon grossely bruised, foure good Nutmegs bruised, foure good Liquorish sticks sliced, and bruised, tye up all your Spices in a fine linnen cloth, and put them into your *Aqua vite*, and tye up your pot very close, and let this infuse a weeke, stirring it three times a day, then let it runne through a jelly bagge close covered; keepe it in glasse bottles.

*To make Almond Butter.*

**T**Ake two pound of Almonds, and blanch them, and let them lye all night in cold water: then grinde them in a mortar very small, and put in a blade of Mace or two; then straine it through a strong cloth as neare as you can, that the milke be not too thin, and let it seethe a prettle while: then put in a little Rose-water, and a little salt when you take it off the fire, and stirre it still: then take a bigge cloth very cleane, and let

two hold it; then you must take the milke and cast it round about the sides of the cloth that the whay may come from it; then with a saucer put it downe from the sides: then knit the cloth, and hang it up untill it have left dropping; then take it forth, and season it with fine Sugar and Rose-water.

*To make Ielly for one that is in a Consumption, or troubled with a loosenesse.*

**T**AKE the feet of a Calfe, and when the haire is cleane scalded off, slit them in the middle, and cut away all the blacke veines, and the fat, and wash them very cleane, and so put them in a bucket of faire water, and let them lye foure and twentie houres, and in that time the oftner you shift them in faire water it will be the better; then set them on the fire in two gallons of water, or somewhat lesse, and let them boyle very softly, continually taking off the scumme and fat which riseth; and when the liquor is more then halfe boyled away, put into it a pinte and a halfe of white wine, and as it boyleth there will come a foule scumme upon it, take it off still cleane, and when the Ielly is boyled enough, you may know, for your fingers will sticke to the spoone; then take it from the fire, and with a Cullender take out all the bones and flesh, and when the Ielly is almost cold, beat the whites of sixe Egges, and put into it, and set it on the fire againe, and so let it boyle

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till it be cleare: then straine it through a cleane cloth into a Bason, and so let it stand all night long; the next morning put it into a skellet, and put to it a pound of Sugar, halfe an ounce of Cinamon broken in peeces, one ounce of Nutmegs, an ounce of Ginger bruised, and a good quantitie of large Mace; boyle all these together till it taste of the Spices as much as you desire, and when it is almost cold, take the whites of six eggs, and beat them, and put into it, and set it on the fire, and when it riseth wilde it in halfe a pint of white wine; then strain it through a jelly bag.

/// *To stay the flux.* (✓)

**T**Ake Date stones, and beat them to fine powder, and take the quantity of one of them, and drink it with posset drink, or beere; use these two or three mornings together, and after as often as you finde occasion; this is very good.

In the month of May gather of the reddest Oak leaves you can get, and still them, and when need requireth make pap thereof, mingled with milk or fine flower, sugar, and cinamom, as oft as your stomack serveth to eat it.

*To make green Ink.*

**T**Ake greene bice and grinde it with gum water, and if you will have it a sadder green, put a little saffron to the grinding.

*To make blew Ink.*

**T**Ake fine flower, and grinde it with a little chalk, and allum, and then put it in a violl.

*For an Ague.*

**T**Ake a handfull of hartstong that groweth in the field, and a handfull of bay salt, and beat them both together in a mortar, and lay this to both the wrists.

*A water good against the plangs, or to be given  
after a surfet.*

**T**Ake red Sage, Celendine, Rosemary, Hearbegrace, Wormwood, Mugwort, Pimpernell, Dragons, Scabious,

bious, Egrimony, *Rosa solis*, and Balme, of e ch a handfull, or like quantity by weight ; wash and shake them in a cloth ; then shred and put them into a gallon of white wine, with a quarter of an ounce of Gentian roots, and as much of Angelica roots ; let it stand two dayes and two nights close covered, and then distill it at your pleasure, and stop the glasse very close in which you keep the same.

*To avoyd urine that is stopped with  
the stone.*

**T**AKE as much black sope as a walnut, temper it with eight or ten leaves of English saffron, spread it upon a round leather as big as the palme of your hand, and cover the navell of your belly therewithall, and it shall cause you to make water.

*For the stone and strangury.*

**T**AKE the filmes that is within the mawes of geese, and let them bee purely dried, and then make powder thereof, and drink it with stale ale, and it will help him with Gods grace. Proved.

*For*



*For scald heads.*

**T**Ake green Coperas, and mingle it with creame till it bee turned yellow, and let it stand three or foure dayes : then take primrose roots, leaves and all, with May butter, and beat the roots and leaves in the butter, and boyle them together with a little beere and butter, and let it touch no salt.

*To cure an old Vlcer.*

**T**Ake a quart of the strongest Ale that is to be gotten, or brewed, halfe a pint of raw honey, two ounces of roch allum beaten, halfe a pint of Sallet oyle, and the quantitie of a Tennis ball of common washing Sope, one ounce of stone pitch beaten; one ounce of Rosin beaten, two ounces of yellow waxe : boyle all these together, and straine them through a thin linnen cloth; and this will cure any old Vlcer.

*A Water to cleanse, and mundifie old rotten  
sores and ulcers.*

**T**Ake a wine pint of stilled water of Planten, as much white wine; put therein two ounces of Roch allum, a dramme of Verdigrease, a dramme of Mercurie sublimed: boyle all these together, and keepe them in a thicke glasse being stoped with waxe very close that the strength go not out; this will cleanse and mundifie old sores: It will also heale a Fistula if you use a siring, so that the water may come to the bottome of the sore.

*The Medicine of medicines proved for  
the Stone.*

**T**Ake a quantity of eg-shells, wash them cleane; those are the best whereout chickens are come; dry them very dry in an oven, or betweene two tile-stones; then make powder thereof, scarce it, and mingle it with sugar, or powder of licoras to give it taste, and let him use it as often as hee needeth, morning and evening, either with Rhenish wine, white wine, or stale ale, a spoonfull of the powder at a time, and use to make water in a cleane bason, and so you shall see the deliverance hereof.

*A precious water for the sight.*

**T**AKE Smallage, Fennell, Rew, Verveine, Egrimony, Daffadill, Pimpernell, and Sage, and still them with breast milk together with five drams of frankincense, and drop of it in your eyes each night : often proved.

*For the Fluxe to stay it.*

**T**AKE the yolke of an Egge, and beat it, then mixe with it one grated Nutmegge, and lay it on an hot tyle stone to bake, and eate thereof fasting, and before Supper, and after meales, and it will stay it. Often proved to be excellent.

*A good Powder for the Gout.*

**T**AKE fine Ginger the weight of two groats, and Enula-campane-roots dryed, the weight of foure groats, of Liquorish the weight of eight groats, of Sugar-candy three ounces ; beat all these into a powder, searce them fine, and then mingle them together, and drinke



drinke thereof morning and evening, and all times of the day. Approved.

*A speciall Medicine for the  
Collicke.*

**T**Ake Horehound halfe an handfull, of Sage, and Hy-  
sop of either as much, twelve leaves of Betony, of  
Centaury sixe crops, one Alexander-root, foure penie  
weight of Enula-campana roots powdered, Spikenard  
of Spaine one penie worth; seethe all these in three  
quarts of fine wort to a pottle, and draw it through a  
linnen cloth, and take three spoonfuls at once morning  
and evening.

*to take a way*

*To take away rednesse of burning of  
the Eyes.*

**T**Ake the white of an Egge, and beat it very well with  
a spoonfull or two of red Rose-water, then put there-  
to the pap of a roasted apple, mingle them well together,  
and spread it upon a little Flaxe; so lay it on the eye,  
binding it on with a linnen cloth.

*Thom*

*For*



# THE THIRD BOOKE of Drawing, Painting, Limming, Graving.

**T**He Art of *Drawing* is in it selfe most excellent, and most worthy commendations in whosoever it is: yea it is an Art so necessarie unto all ingenious Artists, as that in no wise they can be without it, and my selfe haue found it to bee true, that the sight of a good draught is more unto an ingenious person, then a whole Chapter of Information; Wherefore I have, according unto my knowledge and practise therein, faithfully penned the same; for the use of all such as beare affection unto the Art, and are desirous to be instructed therein: And for that diuers persons cannot attaine unto it, or perhaps are loath to bestow any time to practise it: whereby they might come to a requisite perfection: for such I have set downe certaine directions, and those so facile, and easie; that persons altogether unskilfull, may (having a patterne) worke very well; But before

Thomas

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His Book

Thomas Tule



before I begin, it behooveth that I prescribe what things are to be had in readinesse to worke withall: first therefore provide good smooth and cleare paper, divers plummetts made of blacke leade, oker, or blacke chalke, or else Charcoals made of Ash, Sallow, or Beech, split in sunder, and pointed; also a wing: having provided these your implements, you shall thus begin to worke. First, let the thing, whose pourtrature you intend to take, stand before you, so that the light be not hindred from falling upon it, and with a pointed peece of charcoale draw it rustically; which when you have done, consider a while whether all the parts thereof are proportionable, and whether it carry the semblance of the thing that you drew it from, which if it do not, wipe it out with your wing, and begin anew: but if it be faulty in one part onely, wipe onely that part out, and draw it againe; whensoever it liketh you, or that you have so drawne it, that you can finde no great fault in it: wipe it over gently with your wing, so that you may perceive the former strokes: then with your blacke chalke, or blacke lead plummetts, draw it as perfectly, and as curiously as you can, and shadow it according as the light falleth upon it; This way is workeman like, and the most difficult of all, yet by a little practice may easily be attained unto: so that the persons stand well affected unto the Art. Instead of white paper, you may take light coloured blew paper, and draw upon it with charcoale, and white chalke pointed, which will shew very wel: but note, that after you have made your draught, you must wet it in faire water, and let it dry of it selfe; this will make the drawing to hold fast on, which would otherwise easily be wiped off. This may serve for such as are contented to take some paines to attaine so noble a Science.



Science. But for others there are divers other helps, which follow in order.

*How to take the perfect draught of any printed, or painted Picture.*

**T**AKE a sheete of Venice (or in stead thereof) of the finest white paper that you can get: wet it all over with cleane sallet oyle: then wipe the oyle off from the paper, as cleane as you can, so that the paper may be dry, otherwise it will spoyle a printed picture by the soaking through of the oyle: having thus prepared your paper, lay it upon any painted or printed picture, and you shall see the picture through the same more perfectly appearing, then through glasse, and so with a blacke lead pen, you may draw it over with ease, and better first with a soft char-cole, and then with a pen. After that you have thus drawne the picture upon the oyled paper, put it upon a sheete of cleane white paper, and with a little stick pointed, or (which is better) with a feather taken out of a Swallowes wing: draw over the picture againe, and so you shall have the same very prettily and neatly drawne upon the white paper, which you may set out with colours, as shall be taught hereafter.

*Another way.*

**H**AVING drawne the picture, first open the oyled paper, put it upon a sheete of cleane white paper, and prick over the same drawing, with a good big pin, then from the cleane sheete, that is pricked, pounce it upon

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another: that is, take some small coale, powder it fine, and wrap it in a piece of Tiffanie or such like, and binde it up therein loosely, and clap it lightly ouer all the pricked lines by little and little, and afterwards draw it ouer again with a Pen or Pencill, or otherwise as you please.

*Another way very pretty and easie to be performed.*

**T**AKE some Lake, and grinde it fine, and temper it with Linseed oyle, and afterwards with a pen, draw with this mixture (in stead of Inke) all the out stroakes of any printed picture, also the muscles: then wet the contrary side of the picture, and presse it hard upon a sheete of cleane white paper, and it will leaue behinde it all the stroakes of the said picture that you draw ouer.

*Another way much like the former.*

**T**AKE Printers Blacking, grinde it fine, and temper it with faire water, and with a pen dipt therein, draw ouer the master stroakes and out lines of the muscles: wet then a faire paper with a sponge, and clap the picture upon it, pressing it very hard thereupon, and you shall finde the stroakes you drew, left upon the faire paper.

*An easie way to lessen any picture: that is, to draw a picture from another, in a lesser compasse.*

**F**IRST, with a ruler, and a blacke lead plummet, draw a line at the very top: also another at the bottome parallel,

lell, or equally distant from the other: from the upper line, let fall two perpendicular or plum-lines even unto the lowermost line, so those foure lines will make a square: now you must diuide this square into diuers equall parts, with a paire of compasses, and draw lines with a ruler and blacke lead plummet, quite over the picture: so the lesse lines will divide the picture into equall parts or squares: then take a faire paper, and make as many squares upon it, as there is in the picture: you may make them as little as you will, but be sure that they are equall, and of just number with those in the picture. Having thus crossed your picture, and drawne over your faire paper into squares, take a blacke lead pen, and draw the picture by little and little, passing from square unto square, untill you



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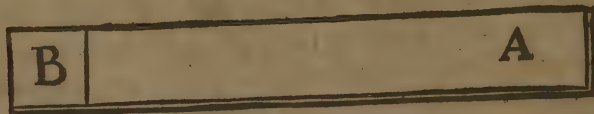
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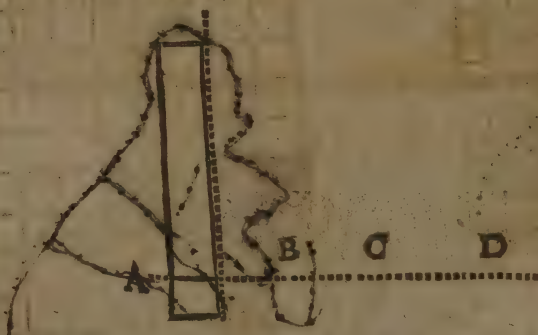
have finished the whole: still observing the order of the squares as they stand in either: then draw it over with a pen, in which second drawing of it over, you may easily mend any fault: when it is dry, rub it over with the crum



of white bread, and it will take off all the blacke lead strokes, and your draught onely will remaine faire upon the paper or parchment. Here I might have entred into discourse of drawing paralels, perpendiculars, making of squares, and such like: but to deale truely, I was as loth to trouble my selfe, as to wearie you: you shall neede onely to provide a ruler of thin brasse or copper, having a crosse thwart one end of it: the charge will not be much, nor the use tedious: the figure followeth, noted A, B.



Let  $a, b, c, d$ , be a line given, whereon to erect a perpendicular or plumb line: lay the ruler so, that the crosse



over the end of it, may lye full upon the Line, then draw a Line by the side of the rule, and it is done.

A verie easie way, to describe a Towne, or Castle:  
being within the full sight thereof.

**F**Or the effecting of this, you must have a frame made, and crossed into equall squares with Lute strings, and figured at the end of each string: this frame must have a foot, wherein it must be made to be lifted higher or lower as occasion serveth; also you must divide your paper that you are to draw upon into so many equal squares as your frame containeth: having the like figures at the ends of each line that there is on the frame; before this frame must be placed a stile or bodkin having a little glasse on the top of it for to direct the sight. Note now that the nearer any thing commeth unto the Center, the lesser it appeareth: hence it is that a Towne of a mile, or more long, or a huge great Castle, at a distance may be comprehended, and that easily within the limits of so small a frame; By the stile direct your sight from one part to another, beginning at one square, and proceeding through the rest in order as they lie, Marke well the following figure.

To make silt

Take over a quantitie of halfe soe much  
white lead a little umber and grind them  
in this followinge p<sup>r</sup>ovish and soe lay it on  
the p<sup>r</sup>ovish

Take Litharg red lead and umber grind them  
to powder a quantitie of silt on them  
by the silt till if they be silted  
it is good silt more silt in  
till it look bluish



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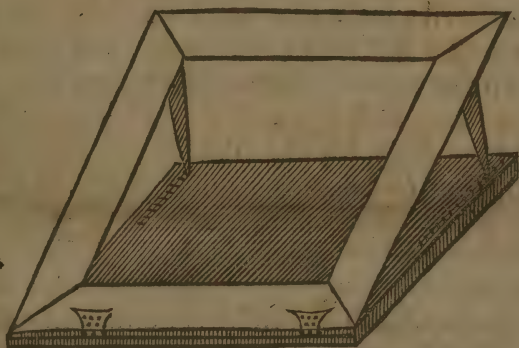
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*How to make a Deske : by meanes whereof you may draw, and that most exactly with great facilitie any printed picture, or sollid Image.*

First let there be a frame made, and with hinges let be joynted unto a board of equall breadth unto it: let this frame also have two staves at the top, at each end one, by meanes whereof the deske may be raised higher, or lower, as need shall require; then fasten to the frame a peece of pure cleare glasse fitted thereunto, and it is finished. The figure followeth.

*The Deske:*



The manner of using this Deske is thus, If the picture that you intend to draw be a printed one, then first fasten it next unto the Deske with waxe, paste, or such like: upon it fasten a sheet of faire paper: If it be in the day-time place the backe of it towards the Sunne; if it be in the night that you worke, place a lampe behinde it, and so you shall see perfectly every (even the least) stroake of the picture, which with your penne you may draw as accurately.

acurately as any Limmer whatsoever. If it be a solid peece, then place it behinde the Deske, betweene the light and the Deske: then fasten a sheet of cleane white paper upon the Deske; raise then the Deske higher, or lower untill you see the perfect shadow of the image through your Deske, and paper, and then draw the posture of the Image, and shadow it afterwards (without the Deske) as light folleth upon it.

*An easie way to take the naturall, and lively shape of the leafe of any hearbe or tree, which thing passeth the Art of man to imitate with Pen or Pensill.*

**F**irst take the leafe that you would have, and gently bruiſe the ribs and veines on the backe-side of it, afterwards wet that side with Linseed-oyle, and then presse it hard upon a peece of cleane white paper, and so you shall have the perfect figure of the said leafe, with every veine thereof, so exactly exprest as being lively coloured, it would seeme to bee truly naturall, by this we learne, that Nature being but a little adjuvated or seconded with Art, can worke wonders.

Now for the farther information of such as are desirous of exemplarie instruction, I have set downe in order following the delineation of the proportion of such things as in my judgement seemed most necessarie for young beginners, and those in such easie demonstrations as for the most part they consist of equall squares, and require no more for their right understanding, then diligent observation, I might have filled a whole Booke of such like: but having considered that what I had done, was a sufficient ground for a further proceſſion, I thought fitting to leave each person to the exercise and practise of his best Invention.



## Of Painting.



The principall end and subject of this Art, is to set out things both in proportion of parts, and livenesse of colour.

For the former, the proportion of parts I have given sufficient information for the meanest capacite in the precedent part of this tractat: now therefore I will speake of the other, the colouring or setting out in colours. But first provide a frame or Easel called by Artists, which is very necessary to worke upon, especially in greater pieces of worke: the forme whereof followeth.

*The Easel.*



John

John

John

Also



### *Of Paynting.*

Also you must provide divers little shels to put your colours in, also pensils of all sorts, both for priming and other: a light ruler of one foot and a halfe, or two foot long: and colours of all sorts ground very fine upon a porphire or marble. Having provided these, you shall set to worke, observing the subsequent directions.

Painting may be performed either with water colours, or with oyle colours.

First I will speake of water colours, wherein I shall observe two things.

First, the diversitie of colours, and preparations. Secondly, their mixture, and manner of laying them on the ground.

First of the first, the diversitie of colours and their preparation.

Colours are either simple or compounded, meerey tinctures of vegetables, or substances of minerals, or both: the simple colours are such as of themselves, being tempered with the water or oyle, doe give a colour. The compounded are such, whose ingredients do exceed the number of one. Vegetables are rootes, juces, berries, and such like things as grow out of the earth. Minerals are such as are dig'd out of the earth, as earth, and stones, &c. All which follow in order, as well their preparations, as description. First note that every colour to be ground, ought first to be ground with the gall of a neat: then let them dry of themselves in a cold place, afterwards grinde them with gumme water for your use.

Now I am come to the second thing observable (to wit) the mixture and laying the colours on the grounds, which is thus: your colours prepared for use, ought to be tempered according unto direction, still observing a  
meane:

meane: and to that end, mixe them by little and little, till the colour please you; first you must lay on the ground colour, and let it dry thoroughly: then with a small pen-fill, pricke on the second colour, else it will be apt to run abroad, nor can you worke it so well, to make it seeme liuely, as you may by pricking it one, specially in small peeces.

If you are to paint ouer maps, or printed pictures that haue writing in them, they use to lay on the thinnest colours, and alwaies before you lay any colours upon paper, wet the backe side of it with faire water, wherein store of Allum hath beene dissolued, and let it dry of it selfe: after wet it againe, and let it dry: doe it the third time, for this will strengthen the paper, that the colour shall not sinke through it, and moreouer it will make the colour shew the brighter, and last, the better.

*To make Gum water to temper your Colours with.*

**T**AKE cleane water, and put into it of gum Arabicke a little, and let it stand untill the gumme be dissolued. Now you must haue a care that it be neither too thicke, by reason of the Gumme, nor yet too thin: for with the one you cannot worke well, and the other will not binde the colour fast.

*A Purple colour.*

**T**AKE two pound of Heidleber, two ounces of Allum, halfe an ounce of ashes of Copper, halfe a pound of water; put them into a Skillet, and let them boyle till a

R

third

Thomas Digges His Book  
1746

*The third Booke.*

third be consumed: when it is cold, straine it into a cleane vessell, and let it stand a while, then straine it into another, and then let it stand till it be thicke enough.

*A Crane Colour.*

You must onely grinde blacke Lead with Gum water.

*Browne Colour.*

**T**Ake good browne, and grinde it with Gumme water: his false colour is made with two parts browne, and a third part white lead, sad it with the same browne.

*Hayre Colour.*

Take Vmber or Spanish browne, grinde it, temper it with Gumme water.

*A Blem.*

Boyle Mulberries with Allum.

*An Emerald Colour.*

**T**Ake Verdigreese, and grinde it first dry, and put unto it a little of the Gall of a neat: also of Saffron, and the juyce of Rew, of each a little: grinde them together, and put them into a shell, and let it dry there: when you would use it, grinde it againe with Vineger or Verjuce, and a little neats gall dissolved in either of them. His false colour is two parts greene, and a third ceruse: it must bee sadded with a good greene.



*A Mottie Greene.*

This colour is compounded of red and Greene.

*A blacke Colour.*

First you must lay on a light blacke, mingled with white lead, and afterwards when it is dry, sad it with good blacke, for sad blacke, mixe Indie Baudias with Gumme water.

*A marble or ashe colour.*

This is compounded of blacke and white.

*A russet or sad Browne.*

This colour is made by compounding a little white, with a good quantity of red.

*A browne Blew.*

Take two parts of Indie Baudias, and a third of ceruse and temper them with gumme water.

*A Brasse Colour.*

This is compounded of Masticot and Vmber.

*A gold yellow for Armes.*

Take Orpment, and Masticot, grind each by themselves: but in grinding of the Masticot, adde a little Saffron, and worke with them. Note you may alay your  
R 2 Orp.

Orpment with chalke, and sadde it with browne of Spain  
or Oker de Luke.

*Azure.*

**T**AKE of white lead foure ounces, of Indicum two ounces, put them into a leaden pot with vinegar : boyle them well, and that which swimmes on the top is the colour.

*A purple or violet Colour.*

**T**HIS is a compounded colour, and it is made either by mixing a quantitie of Azure, and a portion of Turnsole : or else by mixing a quantitie of cusslet, and a quantitie of Azure:

*Sanguine or Blood-colour.*

**T**HIS is likewise a compounded colour, and it is made by mixing a good quantitie of Cinaper with a little blacke.

*Orange-tawny.*

**T**HIS colour is compounded of a bright red, and a bright yellow.

*A Lyon-tawny.*

**T**HIS colour is made by mixing red lead and Mastice together.

*A Canation, or Flesh-colour.*

**F**irst you must lay on a white colour tempered with gumme-water, and when it is drie you must go it over againe with Vermillion or lake, or else you must temper ceruse and vermilleon together, and being dry, go over it againe with lake or vermillion.

*A Peach Colour.*

This is compounded of Ceruse and Vermillion.

*A Skie Colour.*

This colour is compounded of vermilleon and azure.

*A Blood red.*

**T**His colour is made of Cinaper, and afterwards saddened with Vermilleon at the sides, or else with a browne colour. A bloody colour, grinde Cinaper; Lake, and Cinaper tops, put them into good water, and if they be too light, put to them a little Turnsole.

*A Lincoln-green.*

**T**His colour is compounded of a good Greene and Saffron.

*A Poppie-jay Greene.*

This colour is compounded of azure, and masticot.



*A good yellow.*

**T**Ake Saffron, or Cambugium, and temper it with gum-water, Sad it with Vermilleon:

*A sable or blacke.*

**T**Ake a Torch, hold it under a lattyn Bason, temper that blacke with gumme-water.

*A velvet-blacke.*

**B**Vrne harts-horne on a Colliers hearth; then grinde it with the gaul of a neat, put it into a shell, and let it dry in the shade: when you would use it, grinde it againe with gumme-water.

*To write gold with Pen or Pensil.*

**T**Ake a shell of gold, and put a little gum-water unto it, and temper it together, and then you may write with it as with other colours.

*To make Azure, or bise sadder.*

**T**Ake blew Turnsole, wet it in gum-water, and then wring it out, and mixe it either with Bise, or else overshadow the Bise with it.

*Red Colour.*

**T**Ake Vermillion, and temper it with gumme water: His false colour is two parts vermillion, and a third part cernse.

*Another*

*Another Red.*

**T**Ake russet, and temper it with gumme-water, clay it with ceruse, and sad it with it selfe.

*Another Red.*

**T**Ake Brassill in grosse powder, allum in powder: steep them in gum water a night and a day: then straine it, and keepe it for use.

*A Greene Colour.*

**T**Ake Copper plates, put them in a copper pot, & put distilled vineger to them: set them in a warme place till the vinegar become blew, then put it out into another leaded pot, and poure more vinegar into it again; let it stand so till it become blew, this do so many times till you thinke you have enough: then let it stand till it be thicke.

*To make good Inke.*

**T**Ake two handfuls of gauls, cut each gaul into three or foure peeces, poure into them a pint of beere or wine, then let it stand eight houres, straine it from the gauls, and put vitreoll therein, and to the vitreoll a third part of gumme, set it on the fire to warme; but let it not seethe, and it will be good Inke, and of these gauls you may make Inke foure or five times more.



*To see the Brasill.*

**T**Ake an ounce of Brasill, twelve ounces of beere, wine, or vinegar, put it in a new pot, let it stand a night; and in the morning set it on the fire, and let it see the till halfe be consumed: then put into it two peny worth of allum beaten together, and as much beaten gum-Arabicke: stirre them well together, and let them see the againe; if you desire to have it somewhat darke, then scrape a little chalke into it when it seetheth: let it not see the over the pot: when it is cold straine it through a cloth, and put it into a glasse well stopt.

*Aurum Musicum.*

**T**Ake one ounce of Salarmoniack, one ounce of quicksilver of counterfein, halfe an ounce of brimstone, bruisse the brimstone, and set it on the fire, but let it not be over hot (lest it burne) then take the Salarmoniacke, and the quicksilver being in powder: mixe them well together, then mingle with them the brimstone: stirre them well, and quickly with a sticke till the brimstone become hard, then let it coole, grinde it on a stone, and put it in a glasse well stopt with waxe, and set it in a pan with ashes; make a fire under it, and let it stand halfe a day in that manner (but not over hot) till a yellow smoke riseth on it, and when the yellow smoke is gone it is prepared.

*Argentum Musicum.*

**T**Ake an ounce of Tynne, melt it, and put thereto one ounce of tartar, and one ounce of quicksilver, stirre them



them well till they be cold: then beat all in a mortar, and grinde it on a stone; temper it with gumme-water, and write therewith, and afterward polish it.

*To write a gold colour.*

**T**AKE a new hennes egge, make a hole at one end, and let the substance out, then take the yolke without the white, and foure times as much in quantitie of quicksilver; grinde them well together, and put them into the shell, stop the hole thereof with chalke, and the white of an egge, then lay it under an henne that sitteth with sixe more, let her sit on it three weeks, then breake it up, and write with it.

*To write with gold out of a Pensil.*

**T**AKE honey, and salt a like quantitie, grinde them well, and put to them a leafe of gold, with a little white of an egge; put it into a mussell shell, and let it purifie; then temper it with gumme-water, and write with it, polish it.

Or else grinde a leafe of silver, or gold, very small with gumme-water, and wash it in a mussell shell as aforesaid.

*To temper Azure of Bise.*

**T**AKE Azure or Bise, and grinde it on a stone with cleane water; then put it in a broad glasse, or shell, and when it hath stood a while all the dregs will fleet above, and the cleane colour will fall to the bottome; then poure out the water with the dregs, and poure the azure in  
S. . . . . cleane

cleane water againe; then stirre the colour and water together, and let it stand, and fine, and after that poure out the water, and dregs againe: do thus till it be well purged; then grinde it againe on a stone with gumme-water, and put it into a horne, or shell; when you paint or write, stirre it, and let the sticke drop into the pen, for it will sinke to the bottome as lead.

*To temper Turnsole.*

**T**AKE Turnsole, and wet it once or twice in cleare water, and let it lye till it be well steeped; then wring it into a dish till the colour be good, and sad; with this you may flourish red letters, or vestures, and this colour shall be darked, sadded, or renewed with blacke inke.

*To make colouring, called Vernix: to varnish gold, silver, or any other colour on vellem, paper, timber, stone, &c.*

**T**AKE Bengewine, and bray it well betwixt two papers, then put it into a viol, and poure on it *Aqua vite*, that it may stand aboue the bengewine three or foure fingers, and let it steepe so a day or two; then pue to it for halfe a violl of *Aqua vite* fine or sixe chieues of Saffron slenderly stamped; this done, straine it, and with a Pensil vernish therewith any thing gilded, which will become bright and shining, drying it selfe immediately, and will continue the brightnesse many yeaes; But if you will varnish on silver, then take the white that is found in Bengewine and dresse it with *Aqua vite* as afore, leauing out the Saffron, and the said vernish made with these  
only



onely is very good to varnish all things as well painted, as not painted: for it maketh Tables of Walnut tree and Hebene to glister if it bee laid on them, and all other things, as Iron, Copper, or Tin gilded, or not: it maketh bright, preserveth and aideth the colour, and dryeth incontinent without taking dust.

*To make a double size to lay gold or silver on an embossed ground.*

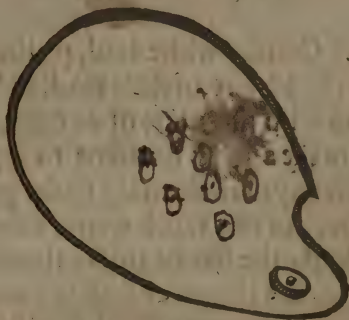
**T**Ake Venice Ceruse, white lead, plaister of an old Image, or chalke, any of these made in fine powder, and ground with the white of an egge, and a little water: this will make a good bottome to lay silver on. But when you use any of these to lay under gold, put to it a little Saffron, put not too much water; mingle it after discretion, and looke the size be thicke standing: put the size thus tempered, in a horne or shell in some Celler, or shadowed place, where it may stand moyst seven dayes, till it be perfect clammy and rotten, and once a day stirre it; the elder the size is, it is the better. If there stand any bubbles on the size, put in care waxe, for that is a remedy thereto, and before you lay it on your worke, lay the size on a scrow, and dry it, and when it is dry, bend it, and if it bend and breake not, then it is perfect, and if it breake, put to it a little water to make it weaker, and proue if it cleaueth fast to the booke, if not, put glayr thereto, and make it more stedfast: the like size may you make of Gypsum, Bolearmoniacke, red or yellow Oker, Orpment or Masticot, with browne of Spaine, or red lead: if euery of them be ground seuerally, and tempered as afore.



## Of painting in Oyle.

**H**ere you must provide one thing more then you did before: that is, a Pallet (so called by Artists) whereupon you must put a small quantitie of euery such colour you are to use, the forme whereof followeth.

The Pallet.



The colours to be used, are altogether such dry substances as I mentioned formerly: as Oker, Vermilion red lead, Vmber, Spanish browne, Lam-black, Gambugice, Masticot, Orpment, Ceruse, or Spanish white, blew and greene Bise, Verdigrease; and a multitude of such like, which may be had at the Rose in *Cornhill, London*.

Your colours must be ground all very finely, and tempered with Linseed oyle; and to preserve them, put them in little earthen pans, and put water upon them, and cover them, that the dust come not at them: thus they may be

be kept a great while, and from thence you may take them as your use doth require.

There are divers colours which without the admixture of another colour, will not be dry a great while; as Lake, Verdigrease, Lam-black: with such you must temper a little Vmber or red lead.

Divers Painters there are, that having haste of worke, doe use to temper their colour with one part of fatte oyle, and two of common Linseed oyle, and by this meanes they make the colours dry the sooner: this fat oyle is onely Linseed oyle exposed to the weather, and so it becometh thicker: yea sometimes you shall see it so thicke, that you may cut it almost like Butter: it may bee made likewise by boyling of it a little while, but the former is the best. As for the tempering of your colours, I can prescribe no surer way then experience with diligent observation.

Thomas Dale

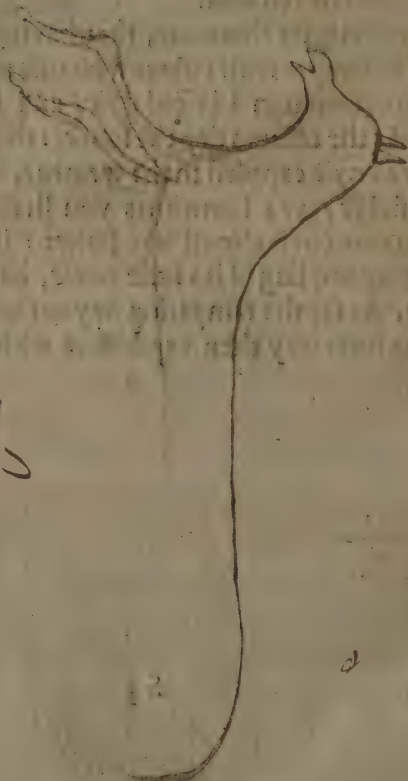
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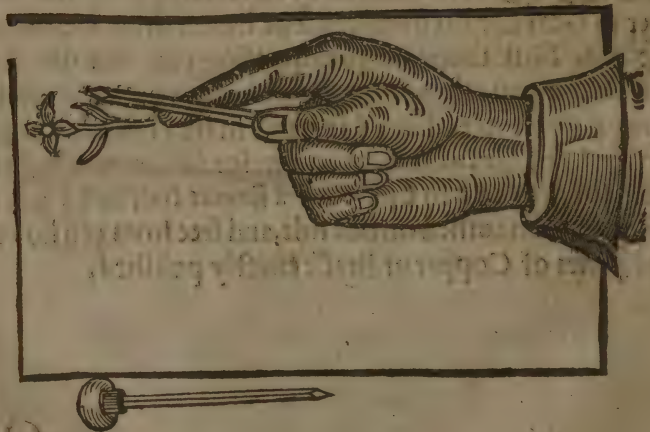
## Of Graving.

**I**T is possible for one to be a good Painter, and yet not to be able to draw well with the pen, because there is not required in a Painter such a curious and exact carriage of the hand: but it is impossible for one ever to Grave or Etch well, except he can draw well with the pen. First therefore presupposing you can doe the first before you attempt the second, you must provide divers graving tooles, both long and short: some for hard worke, some for sweet worke, some for smaller worke, and some for greater: also a peece of a Beaver hat, and a good oyle stone, smoothed on one side, and free from pin holes, and plates of Copper or Brasse exactly polished.

Of

## Of Gravers.

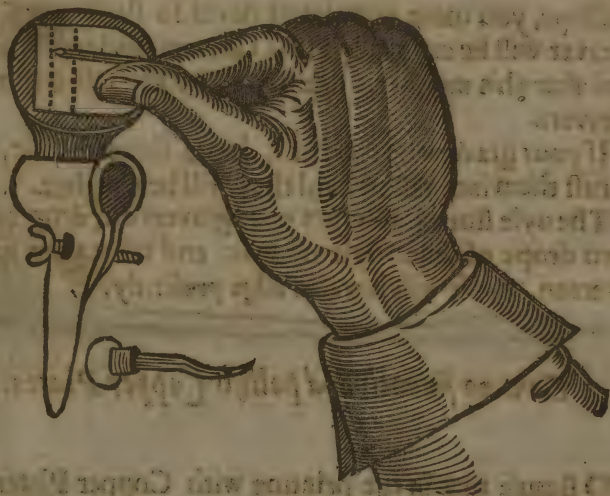
**T**Here are two principall sorts of Gravers, the long and the short: the long are straight, and for to engrave Plates withall, especially the greater, and these are to be held as the figure following doth expresse: where you may note that the pummell of the Graver



resteth against the ball of the thumb, and the point is guided with the forefinger. And there ought to be a little bagge of sand under your Plate, to the end that you

you might turne your plate upon it as your worke doth require.

The second sort is a short Graver, and turneth up somewhat at the end, and that is to engrave Letters and Scutchions in plate scales, and smaller plates, being fastened in some convenient instrument: this must be held likewise according unto the expression of the figure following: where it is to be noted, that the pummell of the Graver is stayed against the further part of the hand, and



is guided by the inward side of the thumb. It were needfull that there were a piece of leather like a Taylors thimble, about the end of the thumb, waxed or glued, whereby to guide the Graver more steadily, and stay it upon occasion.

T

How



*How to make Gravers.*

**P**ROvide some good crosse-bow Steele, and cause it to be beaten out into small rods, and softened: then with a good file you may shape them at your pleasure: when you have done, heat them red hot, and dip them straight downe into sope, and by so doing, they will bee hard indeed. Note that if in the dipping of them into the sope, you turne your hand never so little awry, the Graver will be crooked. These Gravers made and hardened after this manner, doe farre exceed all the other Gravers.

If your gravers be too hard, heate them a little, and thrust them into tallow, and they will be tougher.

The oyle stone is to whet your gravers on; drop one or two drops of sallet oyle upon it, and whet your graver thereon, and it will have an edge presently.

*How to smooth and pollish Copper Plates.*

**B**Ecause that in the printing with Copper Plates, the least scratch, though it be scarce visible, receiveth its impression, and so many times disgraceth the worke: I have set downe a way to smooth plates for impression.

First, take a piece of Brasse, or Copper, of what bignesse you intend, of an indifferent thicknesse, and see as neere as you can, that it bee free from fire flaws. First beat it as smooth as you can with a hammer, then rub it  
smooth

*I am the comrade of slane by*

*I am the comrade*

*From*

smooth with a pumice stone that is void of gravell, (least it  
race it, & so cause you as much more labour to get the out)  
burnish it after with a burnishing iron, having first drop-  
ped a drop or two of sallet oyle on it: then rub it over  
with a cole, prepared as is after taught, and lastly with a  
peece of beaver hat dipt in sallet oyle, rub it very well for  
an houre: thus you may polish it exactly.

*How to prepare your Coales.*

**T**Ake Beechen charcole, such as when they are broke,  
doe shine, such as are void of clifts, and such as  
breake off even: burne them againe, and as soone as  
they are all through on fire, quench them in chamber lye:  
after take them out, and put them in faire water, and re-  
serve them for your use.

Having prepared all things in a readinesse, you must  
haue a draught of that you intend to cut or engrave.

Take the plate then, and waxe it lightly ouer, and then  
either pounce the picture upon it, or trace it, or by draw-  
ing ouer the lines of the picture with ungummed inke, re-  
print it upon the Plate: then worke upon it, obseruing the  
shadow, so that being printed, it may stand right, for it  
will be backward upon your plate: when you haue cut one  
stroke, drop a little sallet oyle upon your peece of Bever,  
and rub over the said stroke, for by this meanes you shall  
better see the stroke, and how to cut the next equall unto  
it, and so the rest proportionally distant one from another;  
but to worke by a Candle, you must place a glasse of faire  
water betweene the Candle, and a paper betweene that

and the Plate, (which casteth a true light) or you will never be able to worke truely and aright.

*Of Etching.*

**E**Tching is an imitation of engrauiing, but more speedily performed. Things may be expressed to the life thereby, but not so sweetly as by the Graver. It is thus performed: the Plate you are to etch upon, must first exactly be polished, afterwards overlaid but very lightly with a ground made for the purpose, (of which anon) and thereupon must be pounced, drawne, or traced, the thing that you are to etch: then the said ground is to be pierced with diuers stiles of seuerall bignesse according as the shadowes of the picture doe require: afterwards the edges of the Plate are to be raised with soft waxe and strong water, (for so they terme it:) (It is to be had at the signe of the Legge in *Foster Lane* a Distiller) is to be put upon it, which in those places were the strokes, are required to be lightly performed, is to be abated or alayed with faire water, which hauing dured a while upon the plate, will eate into it, as it were engraven, then put it into cold water, and wash it about, and it will leaue eating further, and then take off the ground and it is done.



*A red ground for Etching.*

Take red lead, grinde it very well, and temper it with varnish.

*A white ground.*

Take one ounce of Wax, and two ounces of Rosin, melt them together, and adde thereto a quarter of an ounce of Venice Ceruse ground fine, lay it on while it is hot.

*A blacke ground.*

Take Asphaltum two parts, Bees waxe one part; melt them together, and being warme, lay it on very thinly with a fine lawne ragge. If it seeme somewhat red in any one part, hold it over the smoake of a Linke or waxe candle, and it will be amended. Note that it is a principall thing in this Art to lay the ground on a right.

*Another way how to engrave with water.*

Take Verdigrease, Mercury sublimated, vitreoll, and allum, alike quantity, beate all to powder, put them into a glasse, and let it stand so halfe a day, and stirre it often, then lay on the plate, waxe, mingled with Linseed oyle, or red lead with Linseed oyle, and write in it



that you meane to grave, then put the water on it, and let it so remaine halfe a day, if you will have it very deepe, let it lye longer. If you will engrave Images, &c. lay the waxe on the Iron or Steele, thin, and draw what you will thereon, that it may touch the mettall, then put the water into the strokes, and it will be engraven.

*How to engrave on a flint stone.*

TAke a Flint, and write on it what you will, with the fat or tallow of an Oxe, afterward lay the flint in vinegar, foure dayes.

*FINIS.*

